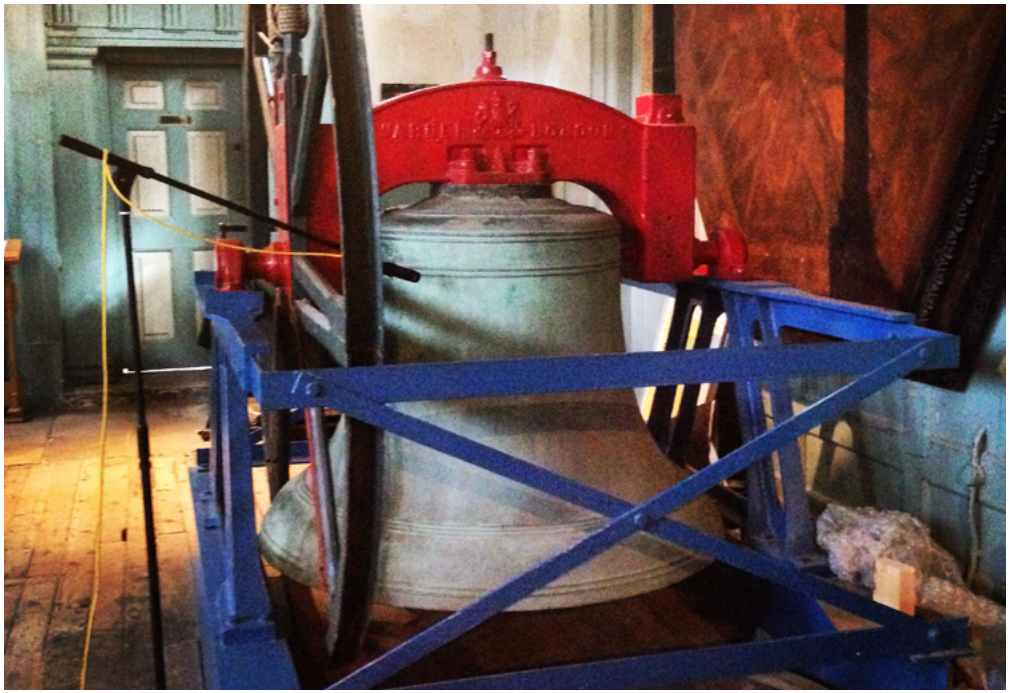

BELL

A semi-improvised performance around an electroacoustic composition

Ian Thompson

Research Portfolio (REF category I - Performance)

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REF statement

Originality

Originality lies in the electroacoustic composition, and its presentation as part of a 20-minute semi-improvised performance in the space where elements used in the composition were recorded. The piece was created from spectrally isolated partials of the overtone series of a large bell being struck inside St. Leonard's Shoreditch Church, London. It explores how isolated spectral elements of a sounding object can be used as materials in their own right for electroacoustic composition. The performance combined loudspeaker playback of the composition with improvised elements of percussion, electronics and organ.

Rigour

The piece was inspired by Arvo Pärt's tintinnabuli approach to polyphonic arrangement, and employs a rhythmic phase shift characteristic of works by composers such as Steve Reich and Terry Riley. The overtone series of a recording of the bell being struck was isolated using iZotope RX software, and each partial then extracted as a separate audio file. These were imported into Avid ProTools as individual tracks for arrangement into an electroacoustic composition, the structure being determined by the decay time of each isolated partial. The four channel composition was diffused live across loudspeakers in a 4.1 configuration around a seated audience, with live performers positioned at either side of the church chancel.

Significance

The performance, to an audience of c.150, was part of the 'Sun at Night' series of events in St. Leonard's Shoreditch Church. It has led to further invitations to collaborate with event organisers Breathing Space Collective, in the roles of sound designer, creative consultant and 'cellist. Subsequent successful joint project applications include; TIDE at Other Worlds festival, Blackpool 2016, and TIME: a Sonic Vigil, at St. Augustine's Tower, Hackney 2017 (featured on BBC Radio 3's 'Late Junction' programme). Further improvised performances as Shiell-Thompson-Wilson include Sound Stage Improv, University of Greenwich, February 2019, Sonos Localia records.

Composition process and performance

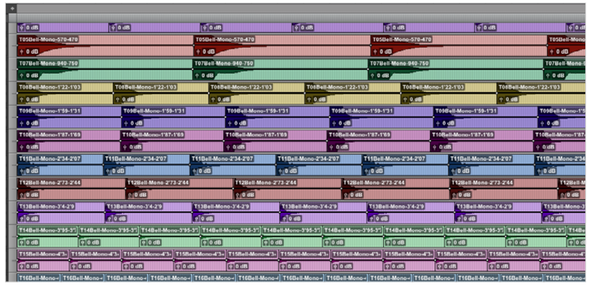
BELL was composed in response to an invitation to contribute to FIRE, an event organised by Breathing Space collective as part of Sun at Night, a secular performance series at St. Leonard's Shoreditch church, London.

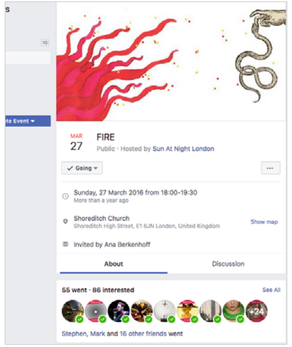
One of the church's bells is now located inside on a frame in the south aisle, and can be struck with a clapper mechanism.

A high-quality audio recording of the bell being struck was made, then isolated into discrete partials using spectral analysis in iZotope RX software. The overtones were saved as 18 individual digital audio files.

Each partial recording was placed onto a separate track in Avid ProTools, recreating the strike tone of the bell when all played simultaneously. Individual partial sounds were repeated sequentially once their amplitude had decayed below 60dBFS. The result is a rhythmic phase shift between each overtone, creating a staggered layering of the partial sounds.

Because the duration of each partial in the sequence is determined by decay time rather than a mathematical relationship, it's possible the cycle may never return to a point at which all 18 partials precisely synchronise; unlike Jem Finer's 1000-year 'Long Player', the piece is potentially infinitely long.



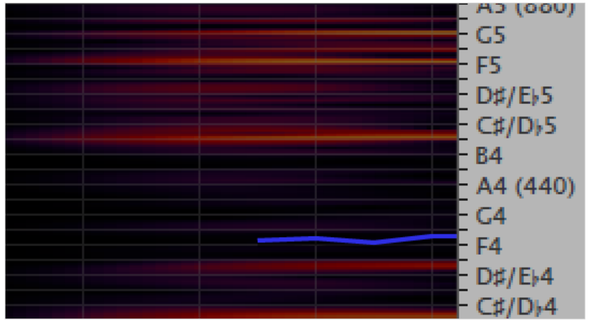


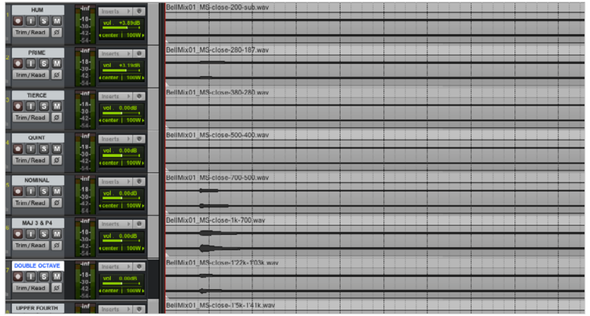
Top composition structure n ProTools
Bottom left: event page on Facebook
Borttom right: publicity poster

For performance, a 20-minute version of the composition was played from a laptop and audio interface through a 12-channel mixing console, with different sets of overtones grouped into outputs which could be sent to each or all of four powered monitor loudspeakers as the piece was played. The loudspeakers were placed in the nave of the church and each corner of the pews, enclosing the audience.

Accompaniment of percussion, electronics and objects included the bell itself, struck occasionally with a variety of beaters. Drums, cymbals and 'whirly-hose' tubes were also used. Performers were located at either side of the chancel, and moved around the nave playing smaller hand bells, joined by members of the audience towards the end.

An audio recording of the performance (giving a sense of audience size) is available on SoundCloud: https://soundcloud.com/ian-tea/bell-live-at-st-leonards-shoreditch-london-uk





Top: bell overtone series spectrogram, showing strike tone in blue
Bottom: correctly named overtone series

Legacy

BELL was part of an ongoing series of collaborations with Breathing Space collective.

Subsequent collaborations arising from the performance include:

- RISE, Other Worlds festival, Blackpool, UK, 2016 (sound designer, creative technical consultant)
- UNEARTH/DESENTERRA, MiA festival, Atouguia da Baleia, Portugal, 2016 (‘cello improvisation)
- CARE! OBJECT BENEATH!, Ashmolean Museum, Oxford, UK, 2017 (‘cello improvisation)
- TIME: a sonic vigil, St Augustine’s Tower Hackney, London, UK, 2017 (sound designer, creative technical consultant)

With Stephen Shiell and Richard Wilson RA

- Sound Stage Improv, free improvised performance, University of Greenwich, 2019 (‘cello improvisation)

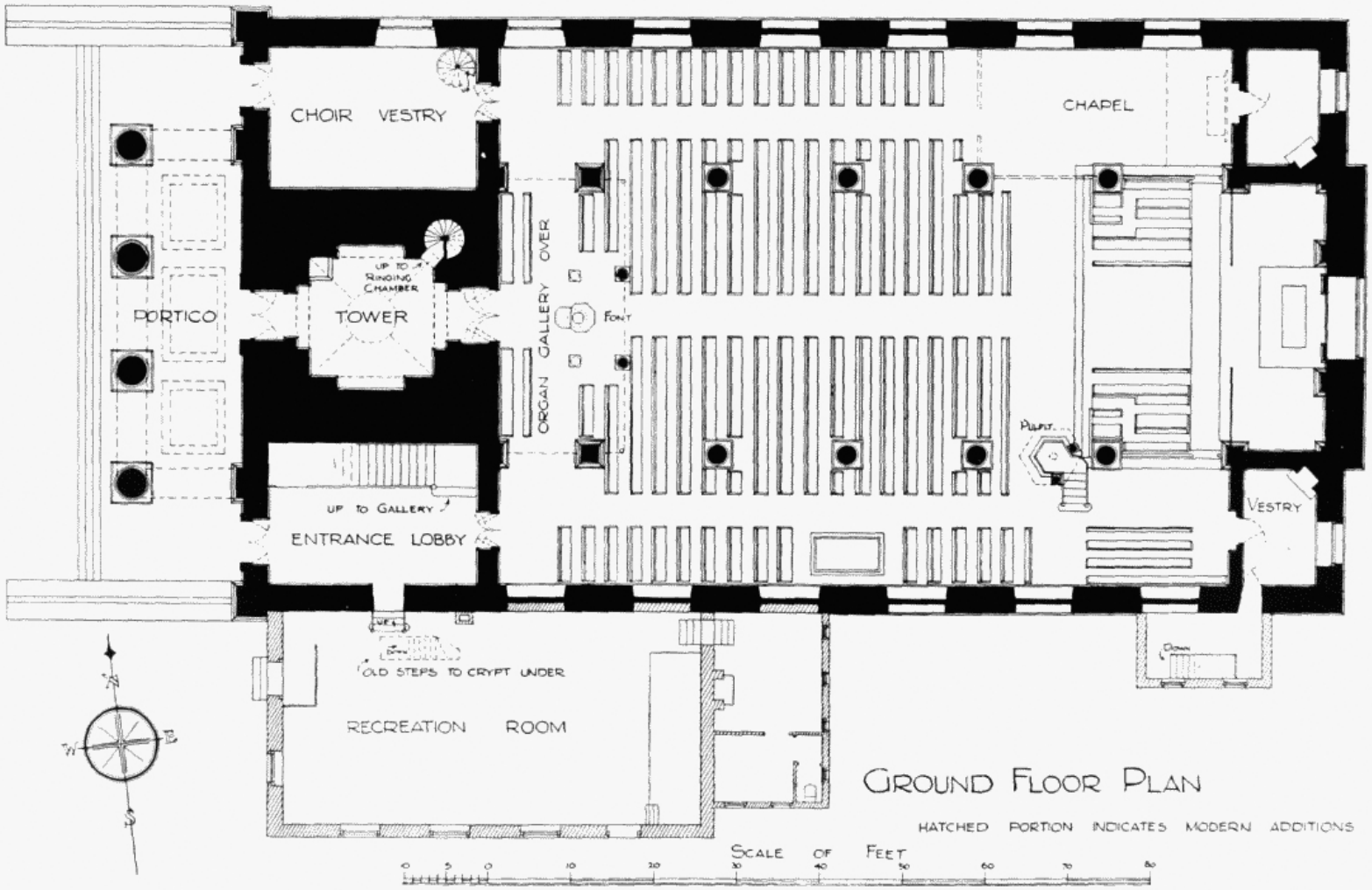
Recordings of BELL available on SoundCloud:

Live performance:
https://soundcloud.com/ian-tea/bell-live-at-st-leonards-shoreditch-london-uk

14-minute solo version of composition:
https://soundcloud.com/ian-tea/bell-13-minute-version

Installation of BELL in St Leonard’s Shoreditch church prior to performance.

CHURCH OF ST LEONARD SHOREDITCH



GROUND FLOOR PLAN

HATCHED PORTION INDICATES MODERN ADDITIONS